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TCS 19314/64
M/EB 531/64
13 November 1964
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MEMORANDUM FOR: Chief, Ballistic Missile and Space Division, OSI

ATTENTION: [redacted] 25X1A

THROUGH: Chief, Requirements Branch, Reconnaissance Group, CGS

FROM: Chief, CIA/PID

SUBJECT: High Frequency Communications Associated with FLIM FLAM Tracking Facilities in the USSR

REFERENCES:
(a) Requirement C-SI-4-80,659
(b) CIA/PID Project C 1397-63
(c) M/EB 256/64 (15 May 64), Golenki
(d) M/EB 371/64 (24 Jul 64), Yeniseysk
(e) M/EB 394/64 (4 Aug 64), Khutor
(f) M/EB 491/64 (20 Oct 64), Ulan Ude
(g) M/EB 493/64 (21 Oct 64), Simferpol

1. This memorandum is a partial response to your requirement dated 4 October 1963 requesting a detailed photo analysis of each FLIM FLAM tracking facility in the USSR.

The purpose of this memorandum is to describe the high frequency communication antennas associated with, or located nearby, each FLIM FLAM facility.

2. High frequency point-to-point communication antennas can be identified at or near six of the seven identified FLIM FLAM facilities. A suspect communication area is identified at the seventh facility, Golenki.

a. Golenki (44-01N 131-46E). A suspect communication area is located on the west side of the fenced operations area. Although no antenna masts can be identified, [redacted] 25X1D 25X1D

b. Khutor (53-06N 158-21E). Two HF communication areas are associated with the FLIM FLAM facility. One of these, consisting of rhombic antennas, is located adjacent on the east to the Type B tracking site. The other, consisting of possible fishbone and Vee antennas, is located adjacent to the main support area. The rhombic antenna area consists of one control building and approximately eleven rhombic antennas. No masts can be identified. 25X1D

GROUP 1
Excluded from automatic downgrading and declassification

Declass Review by NIMA/DOD

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The following are azimuth orientations based on the general orientation of clearings formed by the antennas in wooded areas:

Length of clearing (feet)		General Orientation (degrees)
900) 440)	Confirmed N/D pair	[redacted]
750) 400)	Suspect N/D pair	
540		
460		
400		
340		
600		
500		
470		

25X1D

The possible fishbone and Vee antenna area consists of one control building and approximately ten antennas. No masts can be identified. Based on the clearings formed by the antennas and feed lines, the antennas may cover an orientation azimuth arc of from generally 45/225 to 170/350 degrees. Some of the general orientations identified, such as [redacted] degrees, 115 degrees, 25X1D 25X1D [redacted] are similar to those of the rhombic antennas.

Without better quality photography, the data obtained on the Khutor antennas must remain in the confidence factor range, if possible.

c. Simferopol (45-03N 33-53E). The Simferopol FLIM FLAM facility utilizes the HF communications of the Simferopol Earth Satellite Tracking and Communication Center. These are located within the northwest portion of the main secured area. Quality of available photography does not permit the identification of masts but ground scars indicate the probable existence of one night/day pair of rhombics and several fishbone antennas. The rhombics are generally oriented at about 15 degrees and the fishbones cover an arc of orientation from approximately [redacted] 25X1D

d. Sary Shagan (45-53N 73-37E). The Sary Shagan FLIM FLAM facility utilizes the HF communication facilities of the Sary Shagan Missile Test Center, as well as communications constructed for Instrumentation Site 1. The communications located at Instrumentation Site 1 consist of two night/day pair of rhombics with azimuth orientations of [redacted] Dimensional data of these antennas is as follows:

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Major Axis (feet)	Minor Axis (feet)
845	[redacted]
435	
845	
435	

25X1D

The absence of dissipation lines and the separation of the antennas probably for diversity reception indicates that they are probably only used for receiving.

e. Ulan Ude (51-52N 107-56E). An HF communications area consisting of one control building and approximately nine fishbone antennas is located on the east side of the main secured area. No masts can be identified. Based on ground scarring the following general azimuth orientations can be identified:

Two at [redacted]
One at
Two at
One at
Three at 125/305 degrees

25X1D

25X1D

25X1D

Four of these fishbones were constructed between [redacted] These are the two oriented [redacted] and one of the three oriented 125/305 degrees.

f. Yeniseysk (58-27N 92-16E). No HF communication facilities can be identified at the Yeniseysk FLIM FLAM facility; however, an HF communications station consisting of a suspect area and six rhombics (three night/day pairs) have been recently constructed at 58-21-45N 92-23-30E, approximately seven nautical miles southeast of the facility which may be in support of the FLIM FLAM operation. Based on the clearings formed by the antennas, the following information is obtained:

Average Dimensions of Clearings (feet)		Average Azimuth Orientation (degrees)
Major Axis	Minor Axis	
[redacted]	[redacted] N/D pair	115/295
	N/D pair	115/295
	N/D pair	[redacted]

25X1D

25X1D

25X1D

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g. Moscow (55-56N 37-58E). No HF communication facilities can be directly related to the Moscow FLIM FLAM facility; however, one communications station presently under construction is of interest. This station is located at 56-03N 38-02E approximately 6.5 nautical miles north-northeast of the tracking facility. It consists of two earth covered probable control buildings and numerous rhombic antennas under construction. Dimensions of earth clearings and azimuth orientations for seven rhombics are as follows:

Major Axis (feet)	Minor Axis (feet)	Azimuth Orientation (degrees)
935	495	[redacted] 25X1D
980	520 } N/D pair	
486	300 }	
870	500 } N/D pair	
520	330 }	
920	480 } N/D pair	145/325 25X1A
450	280 }	

3. The photo analyst on this project is [redacted] who may be contacted on extension 3623 should you have any further questions concerning this project.

4. This project is not considered to be complete.

[redacted] 25X1A

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